

WHAT IS CLAIMED IS:

1 1. A radio frequency (RF) proximity detection and identification system,
2 comprising:
3 at least one RF transmitter for receiving a control signal, modulating an RF signal to a
4 preset modulation frequency upon receipt of the control signal, and wirelessly transmitting the
5 modulated signal; and
6 an RF receiver for receiving the wirelessly transmitted modulated signal, determining
7 the modulation frequency, and transmitting the modulation frequency to a remote location.

1 2. The RF proximity detection and identification system of Claim 1, wherein a
2 transmission power of the RF transmitter is preset to transmit the modulated signal within a
3 predetermined range.

1 3. The RF proximity detection and identification system of Claim 2, wherein each
2 of the at least one RF transmitters are modulated to a different frequency.

1 4. A critical band encoding technology (CBET) system having at least one
2 portable people meter (PPM) and a base unit, the CBET system containing a radio frequency
3 (RF) proximity detection and identification system, comprising:

4 an RF transmitter located in each PPM for receiving a control signal, modulating an
5 RF signal to a preset modulation frequency, and wirelessly transmitting the modulated signal;
6 and,

7 an RF receiver located in the base unit for receiving the wirelessly transmitted
8 modulated signal, determining the modulation frequency, and transmitting the modulation
9 frequency to a remote location.

1 5. The CBET system of Claim 4, wherein the transmission power of the RF
2 transmitter is preset to transmit the modulated system within a predetermined range.

1 6. The CBET system of Claim 5, wherein the RF transmitter further comprises an
2 RF modulator for receiving the control signal and outputting an RF signal modulated to a
3 preset frequency.

1 7. The CBET system of Claim 6, wherein the RF receiver further comprises an
2 RF demodulator unit for receiving the wirelessly transmitted RF modulated signal,
3 demodulating the received signal, and determining the modulation frequency of the received
4 signal.

1 8. The CBET system of Claim 4, wherein the RF transmitter located in each of
2 the at least one PPM is modulated to a different frequency.

1 9. A radio frequency (RF) proximity detection and identification method
2 comprising the steps of:
3 modulating an RF signal to a preset modulation frequency upon receipt of a control
4 signal;
5 wirelessly transmitting the modulated signal from a transmitter;
6 receiving the wirelessly transmitted modulated signal;
7 determining the modulation frequency of the received signal; and
8 transmitting the modulation frequency to a remote location.

1 10. The RF proximity detection and identification method of Claim 9, wherein a
2 transmission power of the transmission of the modulated signal is preset to transmit within a
3 predetermined range.

1 11. A critical band encoding technology (CBET) system having at least one
2 portable people meter (PPM) and a base unit, the CBET system containing a radio frequency

3 (RF) proximity detection and identification system, the RF proximity detection and
4 identification system comprising:
5 an RF transmitter unit contained in each of the at least one PPM, comprising:
6 an RF modulation unit for receiving a control signal and modulating an RF
7 signal to a preset modulation frequency; and
8 a transmitter for transmitting the modulated signal as an RF modulated signal;
9 and
10 a receiver for receiving the transmitted modulated signal; and
11 an RF demodulator unit for demodulating the modulated signal, and
12 determining the modulating frequency of the signal.

1 12. The RF proximity detection and identification system of Claim 11, wherein the
2 modulating frequencies are transmitted to a remote location for further processing.

1 13. The RF proximity detection and identification system of Claim 12, wherein a
2 transmission power of the transmitter is preset to transmit the modulated signal within a
3 predetermined range.